## **ARDENSUITE Connected to i.s.h.med**

Austria's largest hospital—the Vienna General Hospital (2100+ beds)—together with the Medical University of Vienna decided in March 2010 to add clinical decision support (CDS) to their hospital information system i.s.h.med (originally delivered by Siemens Health Services, now a Cerner Corporation product). Opting for Medexter's CDS solution ARDENSUITE, they acquired an extended site license for both patient care as well as for research and teaching purposes.

## **ARDENSUITE with Innovation Guarantee**

The ARDENSUITE technology is highly innovative and a unique CDS solution: It has been developed for clinical use and is specifically tailored to meet clinical requirements. It is based on Arden Syntax, an established medical knowledge representation and processing language that is a state-of-the-art Health Level Seven (HL7) International standard and approved by the American National Standards Institute (ANSI). Since the introduction of Medexter's ARDENSUITE at the Vienna General Hospital and the Medical University of Vienna, new and improved Arden Syntax versions have been implemented by Medexter, as every ARDENSUITE license comes with an innovation guarantee. Now, version 2.10 is in operation; as of version 2.9, the Arden Syntax standard is augmented by fuzzy concepts.

## **Uniqueness Due to Fuzzy Logic**

Due to the integration of fuzzy concepts, a powerful feature of the ARDENSUITE is its possibility to additionally accommodate the high degrees of uncertainty often found in real-life medicine. Linguistic as well as propositional uncertainty is taken into account. The implementation of fuzzy concepts is a globally unrivaled feature, as it allows to model human decision making processes more closely to the circumstances of real-life medicine than conventional CDS systems, which only allow simple yes/no outcome possibilities.

## **Clinical Applications in i.s.h.med**

Present ARDENSUITE applications at the Vienna General Hospital are: "Standard operating procedure (SOP) checking for chemotherapy treatment of melanoma patients" (see image), "Prediction of metastases in melanoma patients", and "Dosing of immunosuppressive drugs for kidney transplant patients". The necessary Arden Syntax medical logic modules (MLMs) for these applications were developed either by the Medical University of Vienna's research groups or by Medexter—in either case in close cooperation with the hospital's clinicians. To access the ARDENSUITE applications from i.s.h.med's user interface, new

	Fall/Aufenthat Pati ruckadressaten Fall: Nokumentstatus Externe Ärzte Bew Kontaktdaten	ent: Patifir: Gesamter Patient egung: Gesamter Patient	Dok.OE: Station 17H
Schema: SOP Nr. 2 - Dacarbaz	ine 800mg	🖌 - in klinischer Validi	ierung
Prä-Chemotherapie Checkliste			
		14.04.2011	04.04.2011
Text	Bernerkung		
<ul> <li>Verabreichungen</li> </ul>			3
▼ Labor		14.04.2011	04.04.2011
<ul> <li>Erythrozyten</li> </ul>	> 4.0 TA	4.1	4
<ul> <li>Härnoglobin</li> </ul>	> 12.0 g/dl	12.3	12
<ul> <li>Leukozyten</li> </ul>	> 3.0 GA	3	3
<ul> <li>Thrombozyten</li> </ul>	> 100 G/I	105	100
<ul> <li>Metaboliten</li> </ul>			
Creatinin	< 1.2 mg/dl	1.3	1.2
<ul> <li>Entzündungsparameter</li> </ul>			
<ul> <li>CRP</li> </ul>	< 1 mg/dl	1	1
<ul> <li>Allgemeinzustand</li> </ul>			
<ul> <li>ECOG State</li> </ul>		1	▼ 1
<ul> <li>Wissensbasiertes System</li> </ul>		Prüfen	Prüfen
<ul> <li>Empfehlung</li> </ul>			akzeptiert
<ul> <li>Status</li> </ul>			
<ul> <li>Erklärung</li> </ul>			

interface elements have to be programmed. This can be done by skilled hospital IT staff, by the i.s.h.med vendor, or by Medexter's development team.

For details on integrating ARDENSUITE into your clinical setting, talk to us now or contact us at office@medexter.com.